What is claimed is:

1. A lithium secondary cell, comprising:

A anode formed on a conductive substrate and said anode comprising a lithium layer including therein either one of a metallic lithium and an alloy thereof, said anode further comprising a metal fluoride substance layer comprising at least one type metal fluoride,

wherein said lithium layer and said metal fluoride substance layer are formed by a vacuum film growth method.

2. A lithium secondary cell according to claim 1, wherein a metal fluoride substance layer is provided on a surface of said anode.

3. A lithium secondary cell according to claim 1, wherein said metal fluoride substance layer is on contact with said conductive substrate.

4. A lithium secondary cell according to claim 1, wherein said anode comprises a multiplied laminated structure in which are laminated a lithium layer and a metal fluoride substance layer being alternately laminated one on other.

5. A lithium secondary cell, comprising:

A anode formed on a conductive substrate and said anode comprising a lithium layer including therein either one of a metallic lithium and an alloy thereof,

said anode comprising a multilayered alternating laminated structure of a lithium layer and a metal fluoride substance layer containing therein at least one type of metal fluoride substance.

6. A lithium secondary cell, comprising:

a anode formed on a conductive substrate and said anode comprising a lithium layer including therein either one of a metallic lithium and an alloy thereof,

wherein said lithium layer further contains at least one type of metal fluoride substance.

7. A lithium secondary cell according to claim 6, wherein said lithium layer is formed by vacuum film growth method.

8. A lithium secondary cell according to claim 6, wherein an amount of said metal fluoride substance within said lithium layer is 1 to 50at%.

9. A lithium secondary cell according to claim 1, comprising a hydrophobic layer containing at least one type of a hydrocarbon or ester, including therein one in which carbon is partially replaced by silicon or one in which hydrogen is partially or totally replaced by fluorine on a surface of said anode.

10. A lithium secondary cell according to claim 6, comprising a hydrophobic layer containing at least one type of a hydrocarbon or ester, including therein one in which carbon is partially replaced by silicon or one in which hydrogen is partially or totally replaced by fluorine on a surface of said anode.

11. A lithium secondary cell according to claim 9, wherein said metal fluoride substance layer is disposed below said hydrophobic substance layer.

12. A lithium secondary cell according to claim 10, wherein said metal fluoride substance layer is disposed below said hydrophobic substance layer.

13. A lithium secondary cell according to claim 2, comprising a hydrophobic layer containing at least one type of a hydrocarbon or ester, including one in which carbon is partially replaced by silicon and one in which hydrogen is partially or totally replaced by fluorine formed under said metal fluoride substance layer.

14. A lithium secondary cell, comprising:

a anode formed on a conductive substrate and said anode comprising a lithium layer including therein either one of a metallic lithium and an alloy thereof, said anode further comprising a metal fluoride substance layer comprising at least one type metal fluoride,

said anode comprising a hydrophobic substance layer which comprising at least one type of a hydrocarbon or ester, including one in which carbon is partially replaced by silicon or one in which hydrogen is partially or totally replaced by fluorine and metal fluoride substance layer which comprising at least one type of metal fluoride substance,

wherein a surface of said anode comprising said hydrophobic substance layer or said metal fluoride substance layer.

15. A lithium secondary cell according to claim 12, wherein:

said metal fluoride substance layer is disposed on a surface of said anode,

said hydrophobic substance layer is disposed therebelow, and

said lithium layer is disposed below said hydrophobic substance layer.

16. A lithium secondary cell according to claim 12, wherein:

said hydrophobic substance layer is disposed on a surface of said anode,

said metal fluoride substance layer is disposed below said hydrophobic substance layer, and

said lithium layer is disposed below said metal fluoride substance layer.

17. A lithium secondary cell according to claim 12, wherein said lithium layer and said metal fluoride substance layer are formed by vacuum film growth method.

18. A lithium secondary cell according to claim 13, wherein said lithium layer and said metal fluoride substance layer are formed by vacuum film growth method.

19. A lithium secondary cell according to claim 14, wherein said lithium layer and said metal fluoride substance layer are formed by vacuum film growth method.

20. A lithium secondary cell according claim 1, wherein said metal fluoride substance comprises at least one selected from a group consisting lithium fluoride, magnesium fluoride, silver fluoride, aluminum fluoride, and calcium fluoride.

21. A lithium secondary cell according to claim 6, wherein said hydrophobic substance layer comprising a carboxylic acid ester, including one in which carbon is partially replaced with silicon or one in which hydrogen is partially or totally replaced with fluorine.

22. A lithium secondary cell according to claim 6, wherein said hydrophobic substance layer comprising at least one of a phthalic acid ester or benzoic ester, including one including one in which carbon is partially replaced with silicon or one in which hydrogen is partially or totally replaced with fluorine.

23. A lithium secondary cell according to claim 9, wherein said hydrophobic substance layer comprises at least substance selected from a group consisting dioctyl phthalate, cetyl naphthalene and neroli oil.

24. A method for manufacturing a lithium secondary cell, said method comprising a step of forming lithium layers comprising a lithium layer including therein a metallic lithium or an alloy thereof used for said anode and a metal fluoride substance layer comprising at least one type of metal fluoride substance by vacuum film growth method.

25. A method for manufacturing a lithium secondary cell according to claim 20, whereby a lithium secondary cell according to claim 1 is manufactured.